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RICHARD W. BROWN
ASSISTANT VICE PRESIDENT
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January 20, 1969
CERTIFIED MAIL

Mr. Wayne C. Bellaman
Regional Sanitary Engineer
Commonwealth of Pennsylvania
Human Services Region VI
996 South Main Street
Meadville, Pennsylvania 16335

Dear Wayne:

This is a reply to your letter of December 27
concerning deep disposal well No. 2.

We can fully appreciate the concern which you have for the reliability and security of our deep well installations. Our concern is equal to yours if not greater because of the problems which we have encountered in the past year and the very substantial costs involved in correcting them. Our approach towards the renovation of No. 1 deep well, the construction of No. 3 deep well and the securing of No. 2 deep well in a stand-by position has been directed towards providing the best and safest installation possible.

We feel that the surest way to avoid future problems is to build on past experience and therefore we have designed this system with the maximum possible safeguards. This is why we selected noncorrosive fiberglass injection tubing and cemented it in place as has been previously described. We can see no possible chance of failure. The security of these installations has been confirmed and agreed to by the oil and gas well inspector of the Pennsylvania Department of Mines and Mineral Industries.

No. 1 deep well does not have a large enough pumping capacity to handle the total liquor volume for a prolonged period. The only time that this would be needed would be in the event of a failure of No. 3 deep well. This is extremely unlikely because of the construction used as mentioned above. If the high-pressure surface line from No. 2 and No. 3 pump house failed, it could be repaired quickly and the capacity of No. 1 well and the existing holding tanks should be enough to avoid any discharge to the lake.

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#1, 2, 3 wells

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Commonwealth of Pennsylvania -2-

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It is impossible to guard against all the possibilities that can be imagined. We are convinced the system is secure and there will be no difficulties.

The fiberglass injection tubing used on No. 1 and No. 3 wells was selected because in five years continuous service it has proved noncorrosive towards the spent pulping liquor. The original tubing in No. 1 deep well was coated with a corrosion-resistant epoxy lining which was continuous except at the couplings. It was impossible to obtain a coating film at the couplings. The corrosion attacked the couplings and these actually corroded through. This allowed the spent liquor to enter the annulus between the injection tubing and the 7" casing. Corrosion then proceeded from the outside of the injection tubing towards the center, resulting in the failure of the injection tubing.

The injection tubing for No. 2 deep well was likewise supposed to be coated with an epoxy plastic. When the residual tubing was removed no coating was found on it so that there was no corrosion protection in the well. This was contrary to the original specifications and is being followed up with the contractor at the present time.

The flow and pressure in both No. 1 and No. 3 wells is monitored continuously. In addition, daily visual examination is made of each well as part of the operator's duties. In view of our proven corrosion resistance to the spent liquor, no other inspection is necessary.

The pressure in No. 2 deep well is monitored three times daily. Thus, any leak, no matter how small through the cement that is in the well would be detected immediately. Remedial steps could then be taken as necessary should this need arise. Again, we are confident that the cementing technique used to put No. 2 well in a stand-by condition will prevent any future problems.

The successful operation of No. 1 and No. 3 wells and the lack of problem with No. 2 in its stand-by condition serves to confirm our conclusions that the wells are secure and won't fail in any way.

If you have any further questions, please feel free to contact me.

Very truly yours,

D. ish

RWB/jms

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